

Application No. 10/803,424
Amendment dated February 28, 2006
Reply to Office Action of November 29, 2005

Docket No.: 30320/19116

LISTING OF CLAIMS

1. (Original) An apparatus for releasably latching an optical module and a cage having a base and a latch opening disposed in the base, the apparatus comprising:

a housing having a pivot element and at least one receiving slot aligned along an axis;

a rotatable actuator having a connector disposed within the at least one receiving slot for movement about the axis, the connector having a cam rotatable between a first position and a second position;

a latching mechanism movable between a latching position and a delatching position, the latching mechanism comprising a slotted mating element for coupling to the pivot element for rotational movement relative thereto, a latch movable in response to rotational movement of the slotted mating element, and a cam follower; and

a biasing apparatus disposed to bias the latching mechanism to the latching position.

2. (Original) The apparatus of claim 1, wherein the biasing apparatus engages the slotted mating element to bias the slotted mating element against the pivot element.

3. (Original) The apparatus of claim 2, wherein the biasing apparatus engages the cam follower to bias the cam follower against the cam in the delatching position.

4. (Original) The apparatus of claim 1, wherein the biasing apparatus is a leaf spring.

5. (Original) The apparatus of claim 1, wherein biasing apparatus has a first support member and a second support member.

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6. (Original) The apparatus of claim 5, wherein the first support member biases the slotted mating element against the pivot element and the second support member biases the cam follower against the cam in the delatching position.

7. (Original) The apparatus of claim 5, wherein the first support member and the second support member are moveable relative to one another.

8. (Original) The apparatus of claim 7, wherein the first support member and the second support member are on a cantilever arm and are at least partially spaced apart from one another.

9. (Original) The apparatus of claim 5, wherein the first support member and the second support member are independently mountable to the housing.

10. (Original) The apparatus of claim 1, wherein the cam follower is a resilient member and wherein the cam deflects the cam follower in the second position.

11. (Original) The apparatus of claim 10, wherein deflection of the cam follower rotates the latch into a retracted position within the housing.

12. (Original) The apparatus of claim 11, wherein the biasing apparatus comprises opposing flanges mountable on the housing.

13. (Original) The apparatus of claim 1, wherein the rotatable actuator is formed of a molded or extruded plastic.

14. (Original) The apparatus of claim 1, wherein the biasing apparatus comprises a first spring member and a second spring member disposed between the cam follower and the first spring member, wherein the second spring member engages the cam follower to bias the slotted mating element into engagement with the pivot element.

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15. (Original) The apparatus of claim 14, wherein the first spring member and the second spring member are separately mountable to the housing and movable relative to one another.

16. (Original) A computer board assembly comprising:

an electronic computer board;

a cage mounted to the electronic computer board, the cage having a base and a latch recess disposed in the base;

an optical module selectively latchable with the cage, the optical module comprising,

a pivot element,

at least one receiving slot aligned with an axis,

a rotatable actuator having a connector disposed within the at least one receiving slot for movement about the axis,

a cam rotatable between a first position and a second position, in response to movement of the connector,

a latching mechanism movable between a latching position and a delatching position, the latching mechanism comprising a slotted mating element for coupling to the pivot element for rotation movement relative thereto, a latch movable in response to movement of the slotted mating element, and a cam follower, and

a biasing apparatus disposed to bias the latching mechanism to the latching position.

17. (Original) The computer board assembly of claim 16, further comprising at least one small-form factor receptacle at an end of the optical module.

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18. (Original) The computer board assembly of claim 16, wherein the optical module is an optical transceiver.

19. (Original) The computer board assembly of claim 16, wherein the biasing apparatus is disposed to bias the mating element against the pivot element.

20. (Original) The computer board assembly of claim 16, wherein the biasing apparatus is disposed to bias the cam follower against the cam in the delatching position.

21. (Original) The computer board assembly of claim 16, wherein biasing apparatus has a first support member and a second support member.

22. (Original) The computer board assembly of claim 21, wherein the first support member biases the slotted mating element against the pivot element and the second support member biases the cam follower against the cam in at least one of the first position and the second position.

23. (Original) The computer board assembly of claim 21, wherein the first support member and the second support member are moveable relative to one another.

24. (Original) The computer board assembly of claim 21, wherein the first support member and the second support member are independently mountable to a housing of the optical module.

25. (Original) A method of selectively latching and delatching an optical module from a cage having a latch recess, the method comprising:

coupling a slotted mating element of a latching apparatus to a tubular-shaped pivot element of a housing, the slotted mating element being coupled to a latch extendible into the latch recess;

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biasing the slotted mating element into contact with the pivot element for rotational movement of the slotted mating element about an axis of the pivot element; and

manually actuating an actuator from a first position to a second position, wherein the latching apparatus is in a latching position when the actuator is in the first position and a delatching position when the actuator is in the second position.

26. (Original) The method of claim 25, the method comprising:

in response to manually actuating the actuator, rotating a cam from a first position to a second position;

disposing a cam follower for movement in response to the cam.

27. (Original) The method of claim 26, the method comprising:

mounting a biasing apparatus to the housing, the biasing apparatus having a first support member biasing the slotted mating element into contact with the pivot element and a second support member biasing the cam follower into engagement with the cam.

28. (Original) The method of claim 27, wherein at least the second support member is moveable relative to the first support member.

29. (Original) The method of claim 27, wherein the first support member and the second support member are separately mountable to the housing and movable relative to one another.